

Toxic Material Cleaning System

Quirepace Limited has completed the design, manufacture and installation of a BVC centralised vacuum cleaning system for the removal of Lead Sulphate, and Lead Oxide which have bulk densities ranging from 1030-1890 kgs/cubic metre.

The system comprising six hose connection points located throughout the facility which are interconnected with a heavy weight pipework system, and connected back to a filter separator and exhauster unit located at ground level.

The system is designed for two operators to be distributed around the pipework system using a 51 mm flexible hose and tool, carrying out general good housekeeping vacuum cleaning duties.



The extracted products, which are mainly powders and small granulate are separated from the conveying air within a filter separator, having filtration media cleaned by the reverse jet technique. The materials are dispensed through a double dump valve system into a screw conveyor for onward processing.

Due to the potential harmful toxic nature of the materials being handled, located between the primary reverse jet filter separator and the inlet of the exhauster unit, alongside is a high efficiency particle arrest (HEPA) grade H13 filter having an efficiency of 99.997% @ 0.3 μm .

Motive conveying air for the system is generated by an exhauster package, provided with a vacuum breaker, silencers, and powered by a 22.0kW motor all located within a force draft ventilated acoustic enclosure. This ensures emitted noise levels are below 75dB(A) at 1 metre measured under free field conditions.

The plant was supplied complete with a sequenced electrical control panel manufactured in accordance with the client's specification, and including the required motor starters and capable of generating the required control voltage.